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[Title Page]

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FISHING IN THE KAVIRONDO GULF, LAKE VICTORIA.

By C. M. Dobbs.

History of the Industry.

228 Although fishing by natives along the shores of the Gulf has been carried on from time immemorial, it was only in 1905 that the fishing industry proper was started by Mr. Aarup, a Norwegian, who found by experience the best size and kind of nets to use.

227 Mr. Aarup, who was almost blind, appears to have done a lot of pioneer work in the industry, and definitely proved that the best mesh was what is known as the 5 inch. This gives a mesh of about 2 inches square. At first shoemakers' twine was made into nets locally, but this was not successful partly owing to the inferior lasting qualities of the twine and partly owing to the slipping of the knots which allowed the fish to escape. Trials were also made with cotton nets of thicker thread. These nets however took no Carp (Ngege and 227 Mbiru) but caught Kisinga (Fwani). Subsequently nets were obtained 439 from Messrs. Wm. Barbour, Lisbourn, Ireland, and these were found so successful that they ousted all the locally made articles and are the only sort used at present. *These nets are sold in the Kisumu Bazaar at a price of Shs. 17/- to 18/- and are 100 yards long, 5 inch mesh and 26 mesh deep, 35 twine three ply. They are of a drab colour and the thread is very fine. White and tanned nets are useless. Trials were made with thicker twine (No. 20) but the catches were small.

The average life of a net is said to be about 20 days, but in the hands of Europeans they have a longer life and sometimes last up to two or three months unless they meet with accidents as when a crocodile gets entangled in them.

In 1921 when the industry was more flourishing than it is to-day up to 20,000 nets were imported annually from Ireland.

Restrictions:

228 The use of nets with a mesh of under 1 inch square is forbidden by law. Trawling is also forbidden except in water of 16 feet and over, and at a distance of not less than a quarter of a mile from the shore; this means that trawlers cannot be used in the Gulf as it is all very shallow.

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* A large number of nets are also supplied to the Kisumu Bazaar by Messrs. Joseph Gundry & Co., Bridport. There is also a certain demand for White Nets.—*Editor.*

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LAWS AND REGULATIONS:

228 The law in regard to fishing in Lake Victoria is contained in an enabling Ordinance entitled The Fish Protection Ordinance, 1908 (Caps. 163 Laws of Kenya) and regulations promulgated at various times by His Excellency the Governor. This Ordinance gave the Governor power to regulate fishing, impose fees and registration of boats, issue licences and determine times of fishing. The first rules published under the Ordinance were the Victoria Nyanza Fish Protection Rules, 1914, Government Notice No. 123, page 682 of the *Official Gazette* for 1914. These rules were applied to all that part of the Lake Victorial lying within the then East Africa Protectorate and to the mouth of every river. It contained the following Regulations:

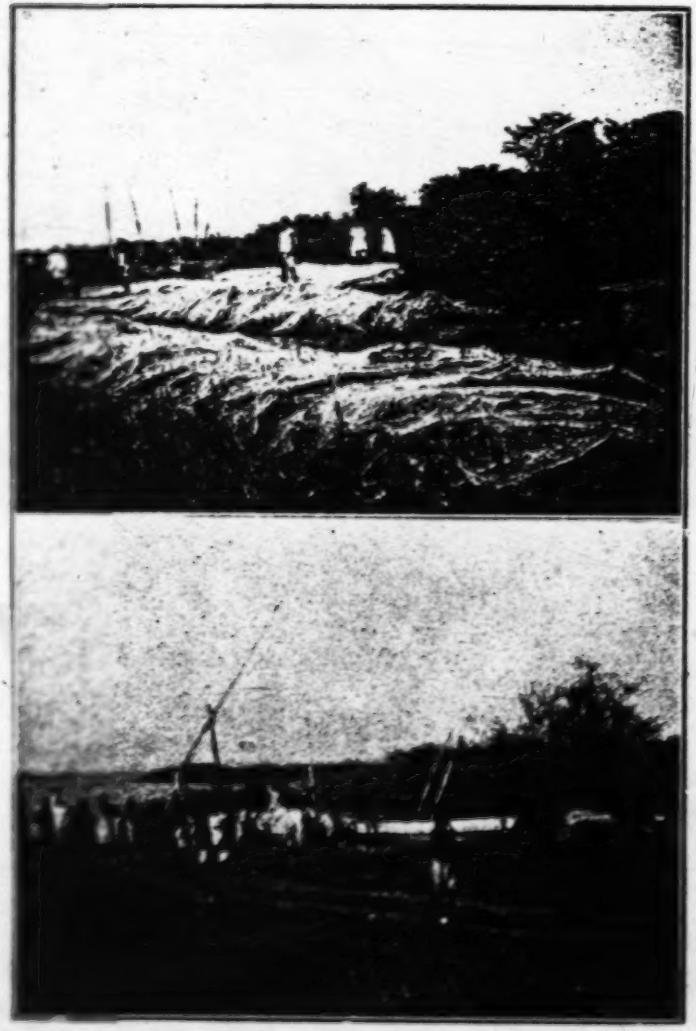
(1) All persons fishing for sale or barter were required to register yearly. The fee was 300/- for all non-natives of Africa. No fee was charged for natives.
(2) All registered fishermen were required to register all boats, nets and stakes.
(3) No mesh was to be less than 1 inch square.
(4) Trawling was prohibited nearer than quarter of a mile from the shore and in water less than 16 ft. deep.
(5) No nets or stakes were to be placed in a fairway.
(6) Fishing grounds with nets to be buoyed.

Later in the year the Victoria Nyanza Fish Protection Amendment Rules were promulgated (Government Notice No. 181 of 3/8/14 *Official Gazette*, page 864). These defined " natives " as being South Kavirondo, Kisumu, and North Kavirondo natives and any other natives of African not of European or Asiatic origin who are in the employment of a non-native who is duly registered.

Further rules were published on 14/2/19 (Victoria Nyanza Fish Protection Rules, Govt. Notice No. 50, *Official Gazette*, page 103). These provided tha any person other than a native—who is exempt from registration under other rules—who employs natives to catch fish, shall be liable to registration and to other provisions as if he were himself a person employed in catching fish, and any person buying or bartering fish for resale or barter either by wholesale or retail shall be registered as if he were employed in catching fish.

METHODS OF CAPTURE:

[471] The fishing industry is in the hands of Indians who own the boats which are manned by natives. These natives in addition to their pay get a few of the fish caught. The vessels used are locally built flat bottomed boats 25 ft. long, 6 ft. beam and 2 ft. deep and cost about £50 each. They carry a lateen sail and the crew is generally five. They go out in the afternoon and lay the nets at sunset taking up the catch before daybreak and returning in the morning. Asembo Bay,



Drying Nets at Nanga Fishing Village, near Kisumu.

Fishing Fleet near Nanga Fishing Village, near Kisumu.

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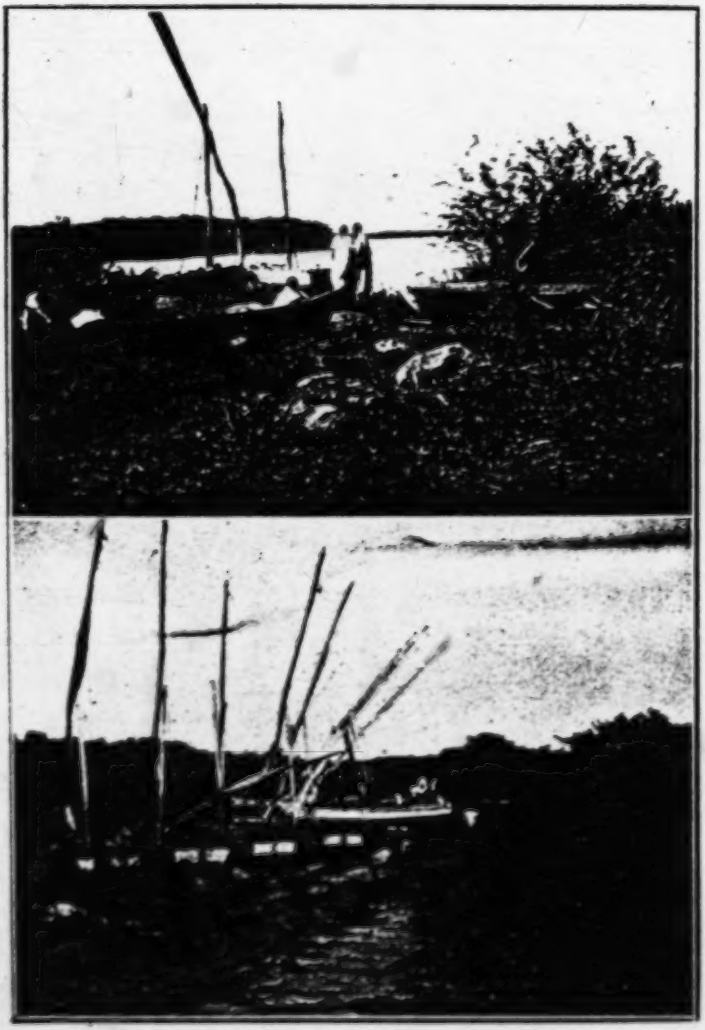

Canoes and Fishing Boat at Nanga Fishing Village, near Kisumu.

Nanga Fishing Fleet, near Kisumu.

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Two Rafts and one Fish Trap and Weir at mouth of Kibos River.

Fish Traps (Musathi) near mouth of Kibos River.

[p.98C.]

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Fish Weir (Kew) at mouth of Kibos River.

Kavirondo raft near fish weir at mouth of Kibos River.

[p. 98 D]

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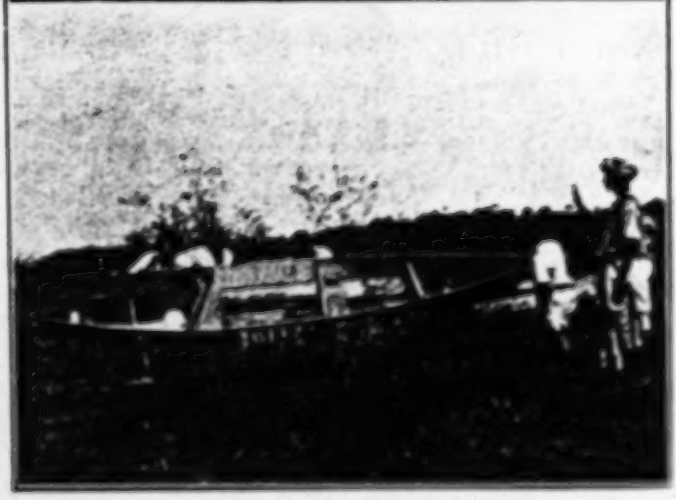

Fisherman in Canoe, Kach Bay, Kisumu.

Canoe on Lake Victoria.

[p. 98E]

228 Kadimu, and Karachonya are the best fishing grounds. Fewer fish are said to be caught during the full moon and the takes are greater when the nights are dark and rainy.

The boats put out 10 to 20 nets each, *i.e.*, 1,000 to 2,000 yards. During the building of the Eldoret Railway one European who supplied fish to the labourers manipulated up to 8,000 yards of nets.

227 The 5 to 5½ inch mesh takes the Ngege, Mbiru, Mumi, Kamongo, Seu, Suma, and sometimes Sira. Occasionally a net of a 3 inch mesh
228 is used and this takes the Ningu, Sira, and Osoga.

These nets run on a coir rope top and bottom. The top is supported by corks and the bottom weighted with iron rings. They only catch fish while drifting and any check through catching on an obstruction will render them useless. The nets are often damaged by floating islands, boats, and crocodiles.

FISHING CENTRES:

There are three Indian fishing villages in the Gulf, at Seme, Asembo, and Nanga. The last is only three miles south of Kisumu and is the only one near enough to supply fish for the Nairobi market.

MARKETING AND COST:

228 The fish for the Nairobi market are brought in by natives in sacks on Sundays, Mondays, Tuesdays, and Thursdays. They are cleaned
435 by Kavirondo women under a tree on the Lae shore near the station and are packed in ice and despatched to Nairobi by the 2-25 p.m. train. The Kavirondo women obtain the entrails as their perquisites and the Indian who superintends takes the gills which appear to be regarded as a delicacy and are extracted before the fish are packed. The fish are packed in ice in large chests. The ice costs 18 cents a pound and one pound is required for each fish. The freight to Nairobi is Shs 3/50 per 100 lbs. Together with the other incidental expenses it costs about 25 cents to send a fish to Nairobi. When the fish are plentiful the usual price is 25 cents a fish in Kisumu market.

ADVERSE TIMES FOR FISHING.

228 The months April to August are not good fishing months and during these months the natives entirely give up fishing in the Lake with drag nets and confine themselves almost entirely to catching fish in the river weirs (Kek).

SPAWNING:

136 Most of the Lake fish spawn in May, June and July. Carp (Ngege and Mbiru) are plentiful during the other nine months. The carp (Kavirondo Ngege) spawn in shallow water with sandy bottom at a depth of 3 to 5 ft., and are thus immune from capture by nets which cannot be used in such shallow spots. They do not spawn in the Gulf except in rare cases but choose the spawning

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136 beds near the Islands where the bottom is sandy. The female scoops out a circular hole and deposits the eggs and the male then fertilises them and takes charge hanging over the nest and keeping away sediment by the action of the fins and tail till the young hatch out. This fanning motion keeps fresh water passing over the eggs.

It seems probable that the fish come up the Gulf to spawn and are then caught. A continuance of this year after year may be exterminating the Gulf fish. There is not any close season under the Ordinance. It is possible that the natives catch fry near to the shore under the impression that they are full-grown fish of a small type.

It will be noted that there is a certain amount of divergence of opinion as to where the fish spawn. My authority for stating that they do not spawn in the Gulf is Mr. Oorloff, ex-Government Assistant Surgeon, who is a local authority on Lake Victoria fish.

DECLINE OF INDUSTRY: DIMINISHING CATCHES.

228 433 There appears to be no doubt whatever that fish taken in the Lake are decreasing and various reasons have been brought forward to account for this. Mr. Acton, Superintendent of Inland Revenue and Conservancy, dealt with this in his annual report report for 1923 and the figures he gave are of interest and worth quoting:

Year.	Sum collected for licences.	Average retail price of fish.
	Shs.	Cents.
1917-18	16,350 ...	60
1918-19	14,530 ...	70 to Shs. 1/-
1919-20	19,350 ...	50 to 75
1920-21	19,200 ...	50
1921 (9 months) ...	16,300 ...	40 to 25
1922	9,900 ...	25
1923	8,120 ...	25

The following are the corresponding figures for the subsequent years:

1924	8,700
1925	10,500
1926	8,250
1927 to 31/5/27 ...	5,700

He states as follows: " During 1923 the fishermen appeared to have great difficulty in paying the annual licence of Shs. 300/- and although given a good deal of time in which to pay most of them had to be summoned to force payment.

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BASKET TRAPS.

1. Angu, used by women.
2. Angu, used by men.
3. Monti.
4. Simyu.

[p. 100A]

Possible Reasons for Decline:

228 The decline in the industry appears to be due to three main factors:—

(a) Fewer fish in the Kavirondo Gulf than formerly.
(b) Decline in retail prices giving less profit.
(c) Poverty of the fishermen.

In regard to (c) it may be remarked that during the years of high retail prices many wealthy merchants, Goans and Europeans, were engaged in fishing. These have since withdrawn and the class now carrying on the work usually have to buy nets and boats on credit or pay heavy interest on borrowed money, destroying the fishers' small profit and causing more and more to abandon fishing"

It is generally admitted that the catches of fish are less than they were. In the early years the average catch is estimated to have been over 25 fish per 100 yards of net while the boats operated at only about a mile from shore. In later years the catch fell to 8 per net and to get these the boats have to go from 12 to 15 miles out. The number of boats has also fallen off. At the height of the industry's prosperity there were 150 boats working on an average 10 nets per boat. Some boats worked as much as 20 to 25 nets.

Native Methods of Capture: Nets.

226 Turning now to the methods employed by the ordinary natives
227 living along the Lake shore we find that fish are caught by drag nets, weirs, traps, harpoons, long lines and to a very small extent with fishing rods. The drag nets used are made of papyrus stems fastened close together and are about 5 ft. deep. They are made in two sizes, the larger size being called by the Jaluo "Ongo" and the smaller "Ogodo." One end of the net is towed out by men in canoes some distance into the Lake and is taken round in a half circle so as to enclose a considerable area of water. The two ends are then drawn towards the shore so that the net brings in with it any fish that have been enclosed. When it is fairly close in men wade into the water with long baskets (Dhelue, Aungo) and capture the fish in these. These baskets are a form of trap made on much the same principle as a lobster pot and consist of a large cone of basket work about 6 ft. long with a smaller cone inside it pointing in the same direction. The inner cone is open at the end so that when a fish enters at the wide mouth of the basket it swims through the hole at the end of the inner cone and gets imprisoned in the space between the two cones.

Basket Traps, Portable and Stationary.

227 A smaller form of Aungo is used by women, called Aungo Katenge. There are two varieties of this, one with the double cone and one with only a single cone. When using the double cone cone they place three

227 or four in a line on the bottom. They then go some distance in front and frighten the fish into the traps. The single cone traps are used by the women in a different way. They hold the baskets in both hands with the wide part facing towards them and wade backwards in shallow water drawing the baskets along the bottom towards them. When the fish enter the basket they raise it out of the water in a perpendicular position. The following fish are caught by this means: Nyawino, Ndere, Ningu, and Akunga (eels). The Ningu is not caught in rivers during May, June and July as it goes to the Lake then presumably to spawn.

Basket Traps used at Weirs.

226 Enormous fish weirs (Dhoho, Kuh) are a feature of the rivers of
227 Kavirondo. Some of these are built of wood and some of stones and extend right across the rivers from bank to bank. At intervals in the weir there are gaps and basket traps (Dhoho, Mumthi) are used on the upper side of these holes to catch the fish as they pass through up stream. The Mumthi are similar in principle to the double coned Aunga, but are made of reeds fastened together longitudinally, while all types of Aunga are plaited.

Portable Traps.

Another form of basket fish trap is the Simyu. This is also a conical basket with a hole at the top or narrow end. The native using it wades along in shallow water pushing it down at intervals on to the bottom of the lake or river. If a fish happens to be imprisoned it is heard splashing inside and the native puts his arm through the top hole and pulls it out. The Simyu is also made of reeds fastened together longitudinally.

Stationary Traps, Baited.

In addition to the foregoing there is another kind of basket trap used called Omoongo, which is almost identical with a European lobster pot and used with bait and in the same way.

Fishing Spears.

226 Fish are sometimes harpooned by natives wading in the water.
411 The harpoon used is narrow and has no barb and is called by the Jaluo Bodhi. Mumi and Kamongo are speared in this way.

The natives of Mohoru are said to go out in canoes on moonlight nights with grass torches and harpoon the fish.

Fishing with Rod and Lines.

226 Fishing with rod and line is indulged in principally as an amuse-
227 ment and by juveniles. Long rods made from a tree called Pus are used by men. Hooks (Dhoho, Ohu) are brought in the bazaar. The bait used is a sort of worm (Dhoho, Omiembe) found in the mud. Mumi (barbel) are caught in this way. The line is made from

papyrus fibre. Small rods made from a tree called Osire are used by children. A dried piece of mtama stalk is used as a float. Nyawizo, Nihira, Ongo, and Sire are caught in this way. The bait used is Onlombo or a piece of groundnut. Long lines, Mugundo, with a large number of hooks are sometimes used. These are left in the water for some time with floats at intervals to buoy them up. 226 227

FISH USED FOR LOCAL CONSUMPTION.

As most of the fish caught by natives is not eaten fresh, but dried, the whole of the population of these locations could easily eat fish caught on the Lake shore. In fact there is no doubt that dried fish is transported and eaten by the natives very much further inland than these Lake shore locations. The whole Jaluo population of Central and South Kavirondo will eat fish if they can get it. The population is approximately as follows:— 251 262 [161]

Central Kavirondo	...	...	...	316,000
South Kavirondo (Luo)	...	...	...	180,387

The two Districts which border on the Lake shores in Nyanza Province are Central and South Kavirondo. The natives living close to the shore in both these Districts spend a large part of their time fishing. It has been estimated that about two to three thousand in each District are more or less permanently employed in this work. They use canoes (Dhoiso, Yiyi) made of rough boards sewn together with grass fibre and caulked with mud. There are probably about 1,000 canoes in each District (Central and South Kavirondo). They are propelled with single bladed paddles (Ngai). 226 [501]

The following are the names and population of the Locations in these two Districts which actually border on the Lake shore from the Sio River on the Uganda border on the North of the Gulf to Mohuru on the Tanganyika border on the South side:— 361

CENTRAL KAVIRONDO.

Name of Location.					Population.
Samia	...	...	...	...	33,000
Kadimo	...	...	...	...	6,000
Sakwa	...	...	...	...	18,000
Uyoma	...	...	...	...	10,000
Asembo	...	...	...	...	18,000
Seme	...	...	...	...	26,000
Kisumu	...	...	...	...	15,000
West Kano		...	...	...	19,000
Nyakach	...	...	...	...	22,000
					162,000

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South Kavirondo.

Karachonya	21,105
Kochia	7,327
Kaniada	9,579
Kasigunga	2,442
Kaksingiri	1,463
Gwasi	5,390
Karungu	2,569
Kadem	11,145
Mohuru	771
Rusinga (Island)	2,099
Mfwangano (Island)	1,792
	65,682

Brief Account of Visit to Kach Bay.

226 The following short account of a trip round Kach Bay and up the Miriu river may be of interest as showing different methods of fishing followed by the Lake shore Jaluo. I had arranged with the son of Chief Amimo of Kanu to go and see the fish being taken out of the basket traps at the weirs at the mouth of the Kibos river and at 6-30 a.m. on May the 29th started off from the Dhow Pier with B. in the Government Motor Boat. It took us about one hour to get to the mouth of the river and on the way we saw the fishing fleet coming back with the night's catch to Nanga fishing station. We ran the motor boat a few yards up the river mouth and landed and the boy lit a fire and prepared breakfast. While waiting we watched the various fish-eating birds which were very numerous. The ordinary 136 Darter Anhinja rufa (Dholuo, Osoo) was there in large numbers. This bird goes right down under the water after the fish. It is said to capture the Fulu, Adel, and Osoga. An occasional cormorant (Dholui, Kwasi) was to be seen and one or two storks (Dholuo, Okol) while numerous birds like seagulls and toons (Dholuo, Sialo) were flying about and occasionally dipping down into the water to capture a small fish.

The most remarkable birds however were the pelicans, *Pelicanus onocrotalus* (Dholuo, Mbuzi) which were floating quietly about and occasionally dipping their enormous beaks into the water and then raising them skyward to allow the unfortunate victim to slip down their throat more easily. Large numbers of kingfishers, *Ceryle rudis* and *Corythornis cristatus* (Dholuo, Kalamendi) were also seen. The empty shells of numerous fresh water snails (Dholuo, Ogongolo) strewed the shore, which was very sandy. While we were waiting a native brought up a small fish trap (Dholuo, Musathi) which he had just taken out of a ditch running into the Lake. This contained five

small fish: two Adel about four inches long, two Sire and one Ningu. 136
We were also shown two small eels (Akungs). When breakfast was
finished we walked up to see the big weir across the river. It was 226
about 50 yards from the mouth and stretched from bank to bank in
a zig-zag line. It was made of rough poles driven into the sandy
bottom of the river which was very sluggish at this point. Numerous
gaps had been left in the barrier and above every gap facing down
stream was fastened a fish trap (Musathi) of which there were about 226
30 or 40 in all. By this time numerous natives had collected together
and several rafts had been brought down to assist in lifting up the 501
traps. These rafts were of several kinds. One kind consisted of long
thin poles of very light ambatch (Dholuo, Mburi) wood fastened
together. This wood, when dry, is as light as cork and is used for
floats for the Mugondo, or stationary lines, and also by the Mohuru
natives for floating their hippopotami harpoons. The second raft was
a large square frame about 12 ft. by 5 ft. made of poles fastened
together three deep by iron rods. The floor appeared to be made of
some sort of matting. This raft, as it appeared to be the safest, we
chose to stand on while watching the fish traps being taken up. The 226
raft was tied up to the top side of the weir while two natives went
into the water which was up to their shoulders and unfastened the
traps one by one. When they were undone the native who was with
us on the raft pulled the trap out of the water with the mouth up
and the fish that were inside slipped to the end of the cone. When
he got it on the raft he turned it the other way up and the fish could
then be pulled out where the inner basket was fastened to the outer
one at the mouth. The fish were then put into a receptacle of matting
work for safe keeping called Ngaha. We watched 20 of these baskets
being taken out and the following is a record of the catch in each
basket. I was informed that these catches were very very small
compared with what is usually taken in the months when fish are
plentiful.

It is noteworthy that only one of the 20 baskets drew a complete blank and in one other both the fish Ngege were dead.

1st trap	1 Mumi	11th trap	5 Ngege
2nd ,, ...	2 Ngege	12th ,, ...	1 Ngege
3rd ,, ...	1 Ngege	13th ,, ...	0 Ngege
4th ,, ...	1 Ngege	14th ,, ...	3 Ngege
5th ,, ...	1 Ngege	15th ,, ...	1 Ngege
6th ,, ...	1 Mbiru	16th ,, ...	3 Ngege
	1 Ningu	17th ,, ...	Empty
7th ,, ...	1 Ngege	18th ,, ...	2 Ngege
8th ,, ...	1 Sire		1 [illegible]biru
	3 Ngege	19th ,, ...	[illegible]
9th ,, ...	1 Ngege	20th ,, ...	[illegible]
10th ,, ...	2 Ngege		

226 The total catch of the 20 traps was therefore 38 Ngege, 1 Mumi, 2 Mbiru, 1 Ningu, and 1 Sire, *i.e.*, 43 fish in all.

We left the Kibos river at 9-30 and went on towards the end of Kach Bay seeing numerous fish eating birds on the way.

Line with Multiple Hooks.

There were also quite a number of natives in canoes and one of these to whom we spoke was working a long line called by the Jaluo Mugondo. This is a very long line weighted at one end with a stone. At intervals along it are hooks fastened to the main line by short lengths of thinner line and baited with pieces of fish mostly Fulu. It is also buoyed at intervals by floats of ambatch (Mburi) wood. The native in the canoe holds the other end. The hooks of some of these lines we saw were the ordinary barbed variety bought in the shops but one man had barbless hooks evidently locally made.

[139]

They were very sharp and curved almost into a complete circle, while the point was slightly bent to one side. I tried to buy this line from the owner but he refused to part with it.

Weirs and Traps, not in Rivers.

Along the shore and end of Kach Bay, near the mouth of the Nyando river, we saw two other varieties of fish weirs called by the Jaluo Osagoru and Bwanza, something on the principle of the river weir (Kok).

The Osagoru resembles a maze and is made of papyrus stalks (Dholuo, Togo) driven into the bottom of the Lake and fastened together and forming a barrier through which the fish cannot pass. As far as I can discover the fish in the course of their peregrinations meet this barrier and move along it until they get caught in a suitably placed basket trap (Muasthi). The Osagoru is as often as not entirely below the surface of the water and just outside the mouth of the Miriu River we came across a canoe and a raft containing two and one man respectively engaged in building this form of trap. We were informed that a fourth man was working on the Lake bottom pushing in the papyrus stalks. He eventually came up for air and it was amazing the amount of time he spent underneath.

[147]

Traps and Artificial Reefs.

The Bwanza is also made of papyrus stalks. It is a small barrier built across little channels cut into the papyrus swamps or occupied out of the sandy shore either on the side of the Lake or on the river bank.

A small gap is left in the barrier, and basket traps are placed on the side away from the Lake or river as the case may be. The fish

226 trying to work their way into these channels get caught in the traps. On leaving the end of Kach Bay we made for the mouth of the Miriu river. On the way we were much interested in the performances of
136 a kingfisher (*Ceryle rudis*) which flew for some time parallel to the boat and a considerable height above the water. At intervals it would spot a fish, poise itself for a second or two, then drop like a stone perpendicularly into the Lake beak first with a splash, to rise again
133 almost immediately and continue its flight. The Miriu is known higher up as the Kipsonoi and Sondo, but is called the Miriu when it passes through the gorge in the escarpment and comes out into the Lake plain. From there it runs through the level country at first between high solid banks, but as it nears the Lake these disappear and are succeeded by dense papyrus swamps. The channel is exceedingly tortuous, in some cases nearly doubling back on itself, and the total distance from the gorge to the Lake is about seven miles. We took the boat about five or six miles up till we grounded on a sandy spot
136 after which we returned down stream. Several crocodiles (Dholuo, Nuang) were sighted on the way up and one varanus (Kalaguena) which is said to eat fish. When we started to float down with the engine running very quietly, we saw more crocodiles lying out on the mud banks, especially on the higher reaches of the river.

These reptiles must destroy vast quantities of fish and as very few of them are shot they are presumably increasing. It took about an hour to get back to the mouth of the river and two hours from there to Kisumu. I saw no otters (Dholuo, Mandoholo) on this trip. Some years ago I saw two swimming in the Miriu river.

The following are the names of the various fish found in the Lake, with a brief description of each of those I have seen. The list has no claim to be exhaustive.

(1) Siwa. A big fish with a nose and mouth like a trunk. Inhabits the Lake. It is not very popular as food. It is
[253] rarely taken in nets or on hooks. A few are taken in traps. Scales very small. Has firm flesh. The natives think that they get itch from eating it. —*Mormyrus sp.*

(2) Nonga. A carp-like fish. Firm flesh which lasts well. This is the principal food fish of the Kavirondo Gulf and is sent to Nairobi in considerable quantities. It is extremely like the Mbiru. —*Tilapia sp.*

(3) Mareo. A good eating fish and very difficult to distinguish from the Ngege. The only difference appears to be that it is a bit darker and the tops of the spine are reddish. It does not keep fresh so long. A small variety of this fish, possibly its fry, is called Obidi. —*Tilapia variabilis.*

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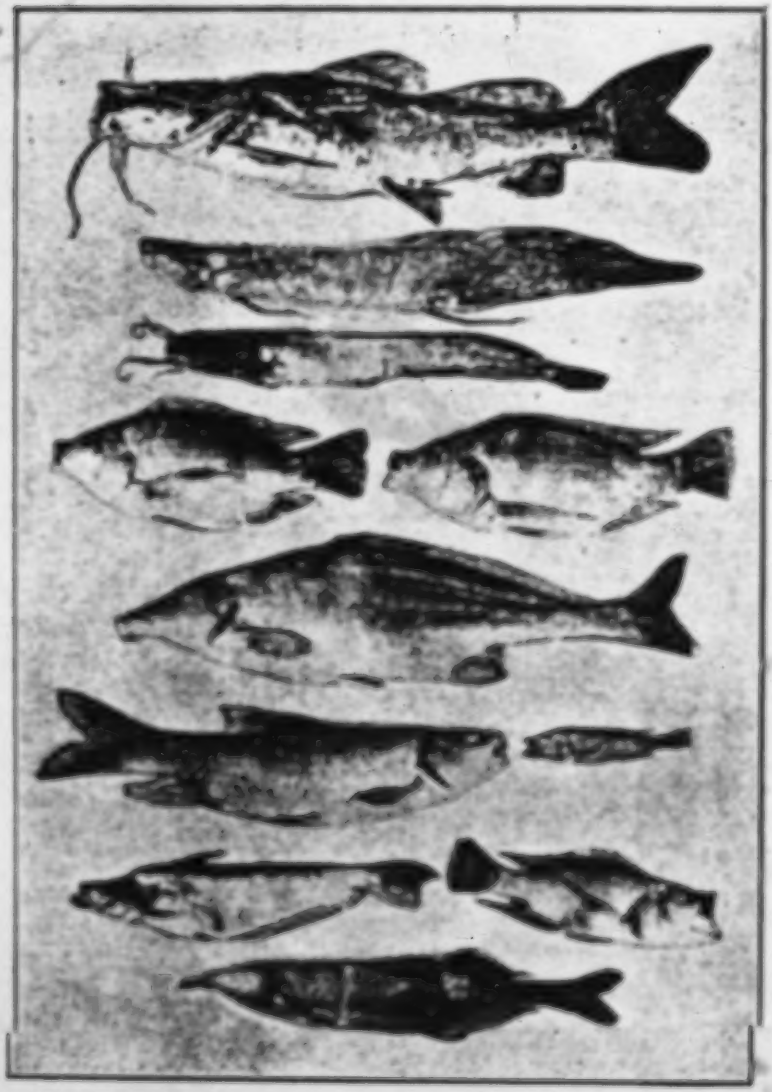

Photo by C. W. Dobbs.

FISH FROM KAVIRONDO GULF.

1. Sen (*Bagrus docmac*).
2. Kamongo (*Protopterus athiopicus*).
3. Nemi (*Clarias mossambicus*).
4. Ngege (*Tilapia sp.*). 5. Mbiro (*Tilapia variabilis*).
6. Sumu (*Mormyrus sp.*).
7. Ywasi (*Barbus radcliffi*). 8. Fulu (*Haplochromis sp.*).
9. Rua (*Schilbe sp.*). 10. Osendagwo (*Haplochromis sp.*).
11. Ongkuri (*Gnathonemus longibarbis*).

[Facing p. 107]

136 (4) Kamongo (Swahili, Mamba). This is the Lung fish *Protopterus æthiopicus*. It is a mud fish and can live out of water in mud for months. The natives are fond of this fish. It breeds in papyrus swamp. When caught it utters a grunting sound. It is not eaten by Mohammedans. Lives in Lake and rivers.

(5) Fulu. A small fish. Lives in Lake and rivers.
—*Haplochromis sp.?*

(6) Sau. A spined barbel. Has a big mouth with whiskers. Eats other fish. Grows very large. Takes meat or fish bait. Not very popular as food. Caught in the Lake. Not a very important fish. Only a few caught. —*Bagrus docmac.*

(7) Fwani. A yellow fish with big scales found often in rivers. Known as the Kisinja. This is the fish caught at the Jinja Falls. A true Barbus. Inhabits the Lake and large rivers. Very bony and poor food. —*Barbus Radcliffi.*

(8) Ondhuri. Found in Lake and rivers. Has a curious fleshy proboscis on the lower jaw. —*Gnathonemus longibirbis.*

(9) Okoko. No scales. Spotted. Upright fin on back. About 9-12 inches. Found in Lake and rivers. Edible.

(10) Mumi. The barbel of South Africa. Called in Swahili Kambare. Has a very flat head and grows very large. Eaten only by Africans. Eats other fish. Of no commercial importance. A mud fish. Will take bait.
—*Clarias mosambiacus.*

(11) Nyigu. Has scales and is very bony. Only eaten by natives Caught in the Lake. The mouth is underneath.

(12) Siri. Found in Lake and rivers. Edible. Has two deep depressions on each side and a hump on top. Has a shovel mouth. Something like a herring. Probably *Schilbe mystus.* Known also as the Butter fish. Breeds in the papyrus. Seldom caught in nets. Generally in fish traps. Said to be quite the best eating fish of Kavirondo waters, but not caught in commercial quantities and probably would not travel well. In season takes bait. When cured and smoked not unlike dried red herring. —*Schilbe.*

(13) Osondoogo. A scaly fish like a John Dory. Found in the Lake. Edible. —*Haplochromis sp.?*

(14) Oscoa. A small silvery fish. Caught along the Lake shore with rod and line. Edible. —*Alestes nurse*

(15) Nyeera. Said to be the young of the Mumi. Very like the Nyawino but lighter.

(16) NYAWINO. Like the Nthira but does not grow big and is of a darker colour. Inhabits the Lake and rivers. Edible. 136

(17) NDERA. Small fish found in the rivers.

(18) OMENA. A very small silvery fish caught in traps in the Lake. —*Engrauli cypris.*

(19) OYORA. Said to be the young of the Ngege.

(20) OBUDI. Said to be the young of the Mbiru.

(21) ADIL. A small scaled fish of silvery colour about four inches long.

There are other fish which I have not been able to see and cannot describe, but they are said to live in the Lake and rivers and to be edible. The names given are: Otenda, Adendi, Otengo, Nyangoro, Obu.

I have also seen small eels (Okunga), about a foot long, caught in the Lake. Crabs (Okela) and Oysters, and fresh water tortoise (Opuk) are also found.

For a good deal of the material embodied in this article I am indebted to reports made some years ago by Dr. Orloff and Mr. Blaney Percival and also for figures and information supplied by the Administrative Officers in Central and South Kavirondo and the Superintendent of Inland Revenue and Conservancy. The native names given are Dholuo (*i.e.*, the language spoken by the Jaluo Kavirondo except where otherwise stated. 138